

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of claims:

Claim 1. (currently amended) A novel protein capable of inhibiting anthrax toxin activity said protein comprising of following characteristics:

- (i) hHydrophobic in nature,
- (ii) mMolecular weight 67 kDa,
- (iii) Sstable at room temperature,
- (iv) Resistant to trypsin,
- (v) ~~Having~~ has no proteolytic activity,
- (vi) ~~I~~inhibits proteolytic cleavage of protective antigen
(PA) of B. anthracis in a dose dependent manner,
- (vii) Binds to IgE, and
- (viii) ~~The protein is~~ devoid of any carbohydrate moiety.

Claim 2. (currently amended) The protein of claim 1 wherein the protein is isolated from the pollen grains of a grass species of a genus selected from group of ~~Imperata cylindrica (Ic), Lolium perenne, Phleum pratense, Cynodon dactylon and related genus~~

consisting of Imperata, a genus related to Imperata, Lolium, a genus related to Lolium, Phleum, a genus related to Phleum, Cynodon and a genus related to Cynodon.

Claim 3. (previously presented) The protein of claim 1 wherein the said protein is stable in the temperature range of about 3°C to 40°C.

Claim 4. (previously presented) The protein of claim 3 wherein the protein is stable in the temperature range of about 4°C to 37°C.

Claim 5. (currently amended) The protein of claim 1, wherein protein in the range of about 25-20 ng completely inhibits the cleavage of the protective antigen (PA) of the anthrax toxin B. Anthracis by trypsin.

Claim 6. (currently amended) The protein of claim 1, wherein the protein in the range of about 15-5 ng partially ~~blocks~~ inhibits the ~~cleavage activity of the Pa of~~ the protective antigen of B. anthracis by trypsin.

Claim 7. (currently amended) The protein of claim 1, wherein the protein in the range of about 25 ng to 11,000 ng is effective in inhibiting ~~the~~ anthrax toxin activity.

Claim 8. (currently amended) The protein claim 1, wherein the protein in the range of about 50 ng to 10,000 ng is effective in inhibiting ~~the~~ anthrax toxin activity.

Claim 9. (currently amended) A process of isolating ~~the novel a~~ protein ~~capable of inhibiting that~~ inhibits anthrax toxin activity, ~~said process~~ comprising steps of:

(i) extracting the total protein from the grass pollen by suspending the pollen in phosphate buffer for a period of about 3h to 15 h under stirring continuously under cold conditions followed by ~~high speed centrifugation at 15,000 rpm,~~

(ii) ~~purifying~~ separating the total protein fractions from the extract of step (i) by column chromatography to obtain protein fractions,

(iii) ~~lyophilizing the dialyzed protein fraction containing the protein of interest obtained in step (ii).~~

~~(iv) subjecting the protein fractions of step (iv) to SDS PAGE followed by Western blotting and immuno staining to separate and locate the protein of interest,~~

~~(v)~~(iv) testing the ability of the purified protein fractions
to inhibit anthrax toxin activity by incubating ~~the isolated~~
protective antigen ~~(PA) of B. anthracis~~ B. anthracis with or
without ~~lyophilized isolated protein from a grass~~ the protein
fraction in the presence of trypsin ~~for and~~ measuring the
inhibition of the cleavage of the PA-protective antigen cleaving
~~(inhibitory) activity by trypsin of the isolated protein of~~
interest by SDS-PAGE in a dose dependent manner, and

~~(vi)~~(v) isolating as an inhibitor of anthrax toxin the protein
fraction that inhibits cleavage of the protective antigen by
trypsin in a dose-dependent manner.~~characterizing the purified~~
~~protein allergenic activity by SDS PAGE, Western blotting and~~
~~immuno staining.~~

Claim 10. (currently amended) The process of claim 9, wherein the
pollen grains for purification of the protein in the step (i) are
collected from ~~grasses selected from group comprising of Imperata~~
~~cylindrica (Ic), Lolium perenne, Phleum pratense, Cynodon dactylon~~
~~and related genus~~ a grass of a genus selected from the group
consisting of Imperata, a genus related to Imperata, Lolium, a
genus related to Lolium, Phleum a genus related to Phleum, Cynodon
and a genus related to Cynodon.

Claim 11. (currently amended) The process of claim 9 wherein the buffer used for extraction of pollen in the step (i) is selected from group comprising of 0.1M ~~PBS~~ phosphate buffered saline or 0.1 M ammonium bicarbonate of pH ranging from 7.0 to 8.0.

Claim 12. (currently amended) The process of claim 9 wherein the material used for the stationary phase of the column chromatography in step (ii) is a hydrophobic resin for reverse phase chromatography ~~selected from octadecyl silica gel and similar silica gels.~~

Claim 13. (currently amended) The process of claim 9, wherein the protein bound to the chromatography column in step ~~(iii)~~ (ii) is eluted with acetonitrile in a range of about 30-75% and about 0.50 ~~%~~ Ttrifluoroacetic acid ~~(TFA)~~ in water.

Claim 14. (currently amended) The process of claim 9, wherein the protein bound to the chromatography column in step (ii) is eluted with acetonitrile ~~is in the~~ a range of about 40-60% and ~~TFA is~~ about 0.1% trifluoroacetic acid in water.

Claim 15. (currently amended) The process of claim 9, wherein the protein obtained in step ~~(vi)~~ (iv) is stable in the temperature range of about 3°C to 40°C

Claim 16. (currently amended) The process of claim 9 wherein the ~~said the protein~~ obtained in step (iv) is stable in the temperature range of about 4°C to 37°C.

Claim 17. (currently amended) The process of claim 9, wherein the protein obtained in the range of about 25-20 ng completely inhibits the cleavage of the protective antigen (PA) by trypsin ~~of the anthrax toxin~~.

Claim 18. (currently amended) The process of claim 9, wherein the protein obtained in the range of about 15-5 ng partially ~~blocks~~ inhibits the cleavage activity of the protective antigen by trypsin.

Claim 19. (previously presented) The process of claim 9, wherein the protein obtained in the range of about 25 ng to 11,000 ng is effective in inhibiting ~~the anthrax toxin~~ activity.

Claim 20. (canceled)

Claim 21. (new) The protein of claim 2, wherein the grass is selected from the group consisting of *Imperata cylindricum*, *Lolium perenne*, *Phleum pratense* and *Cynodon dactylon*.

Claim 22. (new) The process of claim 9, wherein the pollen grains for purification of the protein in the step (i) are collected from a grass selected from the group consisting of *Imperata cylindricum*, *Lolium perenne*, *Phleum pratense* and *Cynodon dactylon*.

Claim 23. (new) The method of claim 9, in which the resin for reverse phase chromatography is octadecyl silica gel.

Claim 24. (new) The process of claim 9, further comprising a step of testing the IgE binding activity of the protein fraction and isolating as an inhibitor of anthrax toxin a protein fraction that specifically binds IgE and inhibits cleavage of the protective antigen of *B. Anthracis* by trypsin.

Claim 25. (new) The process of claim 24, in which IgE binding is measured by Western blotting of SDS-PAGE separated proteins.